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09/992,984	11/05/2001	Michael Baentsch	CH920000018US1	7655

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EXAMINER	
PATEL, NIRAV B	
ART UNIT	PAPER NUMBER
2135	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/06/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/992,984	BAENTSCH ET AL.	
	Examiner	Art Unit	
	Nirav Patel	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2007 (Amendment)*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,10,12,14-17 and 19-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 10, 12, 14-17, 19-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed on January 18, 2007 has been entered. Claims 1, 3-6, 10, 12, 14-17, 19-22 are pending. Claims 7 and 9 are canceled and Claims 1, 4, 5 and 6 are amended by the applicant. Claims 19-22 are new added claims by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwabe (US Patent No. 6,883,163) and in view of Stammers et al (US Patent No. 7,069,554).

As per claim 1, Schwabe teaches:

the Java card CAP file is created from an the original file contains classes that are capable of being compiled, and wherein the only executable instructions in the Java card CAP file are applets [Fig. 4-6, col. 6 lines 60-67, col. 7 lines 1-3, 10-15].

a language-verification step for verifying said converted Java code file for compliance with Java language specifications [col. 16 lines 60-67, col. 17 lines 1-33 Fig. 10A-10D, 13A, 13B].

Stammers teaches:

a conversion step for converting said Java card CAP file (i.e. reduced file or JAR file) into a corresponding converted Java code file (i.e. class objects) that is semantically identical to said Java card CAP file [col. 7 lines 21-26], wherein said conversion step further includes: a preconversion substep for converting Java card IDs contained in said Java card CAP file into symbolic names, and for converting said Java card CAP file into a standard Java format, to obtain a preconverted file [col. 7 lines 21-27, col. 8 lines 3-7 i.e. the classloader creates class objects only from class files contained in the JAR file signed class items, and calls the initialistion file object to read the initilalisation file]; and a mapping substep for replacing in said preconverted file externally defined names with original names by using a mapping scheme between Java names and tokenized identifiers, to obtain the converted Java code file for a language-verification step [col. 7 lines 25-40].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Stammers with Schwabe to arrange and test the functional components, since one would have been motivated to verify the authenticity and/or interaction with the other components [Stammers, col. 2 lines 14-16].

As per claim 3, the rejection of claim 1 is incorporated and Schwabe teaches:

said mapping substep is performed using a referenced Javaexport file which is available as a result of creating said Java card CAP file from said original Java code file [col. 18 lines 5-17, col. 16 lines 18-35].

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwabe (US Patent No. 6,883,163) and in view of Stammers et al (US Patent No. 7,069,554) and in view of Ji (US Patent No. 6,272,641).

As per claim 4, the rejection of claim 1 is incorporated and Schwabe teaches the language verification of a Java card CAP file [col. 18 lines 5-17, col. 16 lines 18-35].
Ji teaches signature step for creating, after verification of said converted Java code file in said language verification step, a cryptographic signature file for the Java card CAP file [Fig. 2, col. 8 lines 1-4].
Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ji with Schwabe and Stammers, since one would have been motivated to detect and prevent operation of computer viruses and other types of malicious computer code [Ji, col. 1 lines 10-11].

4. Claims 5, 6, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwabe (US Patent No. 6,883,163) and in view of Stammers et al (US Patent No. 7,069,554) in view of Ji (US Patent No. 6,272,641) and in view of Levy et al (US Patent No. 6,092,147).

As per claim 5, the rejection of claim 4 is incorporated and Ji teaches the Java card CAP file with the signature [Fig. 2].

Levy teaches:

a loading step for loading the cryptographic signature file to a chipcard together with the Java card CAP file, wherein the cryptographic signature file is attached to the Java card CAP file when loaded in the chipcard [Fig. 5, 4, col. 6 lines 11-27].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Levy with Schwabe, Stammers and Ji, since one would have been motivated to prevent unauthorized access to the data/information [Levy, col. 1 lines 63-65].

As per claim 6, the rejection of claim 4 is incorporated and Levy teaches:

an executing step for executing said Java card CAP file upon a positive cryptographic verification [col. 9 lines 6-27].

As per claim 20, Schwabe teaches:

converting an original file into a reduced file (CAP file of JAR file), wherein the original file contains a class description section and an instruction section, and wherein the reduced file contains a code description section that is based on the class description section, and wherein the reduced file contains a code section that is based on the instruction section, wherein the original file contains classes that are capable of being

compiled, and wherein the only executable instructions in the reduced file are applets [Fig. 4-6, col. 6 lines 60-67, col. 7 lines 1-3, 10-15].

Stammers teaches:

converting the reduced file into a converted file, wherein the reduced file and the converted file are semantically identical [col. 7 lines 21-26]

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Stammers with Schwabe to arrange and test the functional components, since one would have been motivated to verify the authenticity and/or interaction with the other components [Stammers, col. 2 lines 14-16].

Ji teaches:

creating a cryptographic signature for the converted file [Fig. 2, col. 8 lines 1-4].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ji with Schwabe and Stammers, since one would have been motivated to detect and prevent operation of computer viruses and other types of malicious computer code [Ji, col. 1 lines 10-11].

Levy teaches:

storing the cryptographic signature and the reduced file in a chipcard, wherein the cryptographic signature verifies that the reduced file was converted by a trusted entity [Fig. 5, 4, col. 6 lines 11-27].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Levy with Schwabe, Stammers and Ji, since one

would have been motivated to prevent unauthorized access to the data/information [Levy, col. 1 lines 63-65].

As per claim 21, the rejection of claim 20 is incorporated and Schwabe teaches: wherein the standard code file is a Java™ file, and wherein the CAP file is designed to be used by a Java™ card [Fig. 4].

5. Claims 10, 12, 14-17, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stammers et al (US Patent No. 7069554B1) and in view of Schwabe (US Patent No. 6883163).

As per claims 10, 12, and 17: Stammers discloses:

a conversion step for converting said reduced file (JAR file) [col. 7 lines 20-26 i.e. Classloader reads the JAR file and converts the class byte code into executable code in Java virtual machine working memory] into a corresponding converted file [col. 7 lines 35-40 class objects] that is semantically identical to said reduced file wherein said conversion step further includes: a preconversion substep for converting Java Card Ids contained in said Java Card CAP file into symbolic names [JAR file is the CAP file. The classloader create class objects only from class files contained in the JAR file signed class items col. 7 lines 26-27], and for converting said Java card CAP file into a standard Java format [Class objects executable in JAVA virtual machine working memory col. 7 lines 20-26], to obtain a preconverted file [initialization file object col. 8

lines 3-7]; a mapping substep for replacing in said preconverted file externally defined names with original names by using a mapping scheme between Java names and tokenized identifiers [i.e. Every Object created by a classloader is tagged with a reference to that classloader. A classloader maintains references to all of the objects it has created in a hashtable keyed on the object name reference to the class file], to obtain the converted Java Code file for a language verification step [col. 7 lines 25-40]. However, Stammers does not specifically teach a method of a language-verification step for verifying said converted file.

Nevertheless, Schwabe discloses the "Populating resource constrained devices with content verified using API definitions" invention, which includes a method to verify the CAP file or binary file using the API definitions, which is an export file of the class file [col. 18 lines 5-17, and col. 16 lines 18-35]. The verification process utilizes the API definition file (Export class file) and the binary file (CAP or JAR file) to create a code sample for execution similar to the class object in Stammers' teaching. The execution result integer parameter should match the declaration method in the binary file [col. 16 line 60 to col. 17 line 13). The codesample and the object are similar. Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Stammers' teaching and incorporate Schwabe's bytecode verification method to verify the JAR or CAP file.

As per claims 14 and 19:

Schwabe disclose "The method for language verification of a Java card CAP file according to Claims 13 and 18, wherein said mapping sub-step is performed using a referenced Java export file (API definition file) which is available as a result of creating said Java card CAP file from said original Java code file" in [col. 18 lines 5-17, and col. 16 lines 18-35].

As per claim 15:

Schwabe discloses "The method for language verification of a Java card CAP file according to Claim 12 the method further comprising: c) a signature step for creating, after verification of said converted Java code file in said language verification step, a second cryptographic signature file" in [col. 17 lines 55-67].

As per claim 16:

Schwabe discloses "The method for language verification of a Java card CAP file according to Claim 15, further comprising: d) a loading step for loading the second cryptographic device together with the Java card CAP file, signature file to a storage" in [col. 18 lines 15-25].

As per claim 22, the rejection of claim 10 is incorporated and Schwabe teaches:

wherein the Java card CAP file is created from an original file that contains classes that are capable of being compiled, and wherein the only executable instructions in the Java card CAP file are applets[Fig. 4-6, col. 6 lines 60-67, col. 7 lines 1-3, 10-15].

Response to Amendment

6. Among the amended claim 1, 4, 5, 6, Claim 1has been modified to include the limitation "the JAVA card Cap file is created from the original file *contains classes that are capable of being compiles and wherein the only executable instructions in the Java card CAP file are applets*", which necessitated new ground of rejection. See rejection above.

7. In view of applicant's argument regarding claims 4 and 5, new references by Ji (US 6272641) and Levy et al (US 6092147) are found and used in combination with various previously cited prior art. See new grounds of rejection above.

8. Applicant has added new claims 19-21, which necessitated new ground of rejection. See rejection above.

9. Independent claims 10, 12, 17 are neither amended as Independent claim 1 to add the claimed limitation "...*contains classes that are capable of being compiles and wherein the only executable instructions in the Java card CAP file are applets*" nor argued expressively in the presented remark filed on 1/18/07. Therefore, the previous rejection is maintained as above.

Conclusion

10. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nirav Patel whose telephone number is 571-272-5936. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

NBP
3/20/07

HOSUK SONG
PRIMARY EXAMINER